

Eric E. Marshman

# CITROËN

Instruction Book

for

Six Cylinder Model

Front Wheel Drive



CITROËN CARS LTD.,  
TRADING ESTATE  
SLOUGH-BUCKS  
ENGLAND

TELEGRAMS:-  
CITROWORKS, SLOUGH

TELEPHONE:  
SLOUGH 23811

## INDEX

|                      |       |
|----------------------|-------|
| General Data         | 2     |
| Running In           | 3     |
| General Instructions | 4-7   |
| Possible Incidents   | 7-9   |
| General Maintenance  | 10-15 |
| Lubrication          | 16-23 |
| Lubrication Summary  | 24    |

# **CITROËN**

## **INSTRUCTION BOOK**

for  
**SIX CYLINDER**  
**FRONT WHEEL DRIVE MODEL**

This book is up-to-date at the time of publication. Modifications may be made from time to time and individual cars may therefore differ in some respects from the information given herein.

Our Service department will gladly give any information relating to such modifications on request.

One copy of this book is issued free of charge for each car, further copies are chargeable.

**CITROËN CARS LTD.**  
**TRADING ESTATE**  
**SLOUGH, BUCKS.**

**Telephone**  
**Slough 23811**

**Telegrams**  
**Citroworks, Slough**

January 1949



# GENERAL DATA

| CAPACITIES OF:-                                 | FRENCH               | ENGLISH                   |
|---|----------------------|---------------------------|
| Engine sump                                     | 7 LITRES             | 12½ PINTS                 |
| Gearbox and differential                        | 2.75 LITRES          | 5 PINTS                   |
| Hydraulic brake system (special Lockheed fluid) | 1 LITRE              | 1½ PINTS                  |
| Water cooling system                            | 12 LITRES            | 21 PINTS                  |
| Petrol tank                                     | 70 LITRES            | 15 GALLONS                |
| <b>TAPPET CLEARANCES (engine warm)</b>          |                      |                           |
| Inlet Valve                                     | .15m/m               | .006 ins.                 |
| Exhaust Valve                                   | .20m/m               | .008 ins.                 |
| Gap between spark plug electrodes               | .4m/m to .5m/m       | .015 to .020 ins.         |
| Gap between distributor contact points          | .4m/m                | .015 ins.                 |
| Ignition advance (hand control in position R)   | 6°                   | 6°                        |
| Alignment of front wheels (track)               | 0 to 2m/m<br>TOE OUT | 0 to 5/64 ins.<br>TOE OUT |
| <b>TYRE PRESSURES (185 x 400 "PILOTE")</b>      |                      |                           |
| Front wheels                                    | 1,400 KG             | 20 LBS.                   |
| Rear wheels                                     | 1,600 KG             | 22 LBS.                   |
| Spare wheel                                     | 1,800 KG             | 25 LBS.                   |

## **TYRE PRESSURE**

Pay particular attention to the pressures given on Page 2.

Under-inflation may cause premature wear.

Over-inflation will detract from the riding comfort.

## **SPARE WHEEL**

It is recommended that the pressure in the spare tyre should be kept slightly higher than the running wheels to allow for loss whilst not in use. The pressure should be checked and adjusted if necessary when the spare wheel is used.

Wheels and tyres, when originally fitted, are balanced. Tyre wear or repair to tyres or tubes may result in wheels becoming unbalanced, thereby causing the steering wheel to flicker slightly. Should this occur, have the wheel balance checked and rectified if necessary, which is a simple operation.

## **IDENTITY PLATES**

The plate carrying the chassis number is fitted on the left hand side of the bulkhead, under the bonnet.

The plate carrying the engine number is fitted on the left hand side of the cylinder block, under the oil filler.

## **RUNNING IN**

Upon the degree of care given to the running in of the car, the ultimate results will largely depend.

The following recommendations should therefore be strictly observed.

During the first 350 miles the speed should not exceed 45 miles per hour in top gear, and 30 miles per hour in second gear.

Between 350 and 1,250 miles the speed in top gear can be gradually increased to 70 miles per hour.

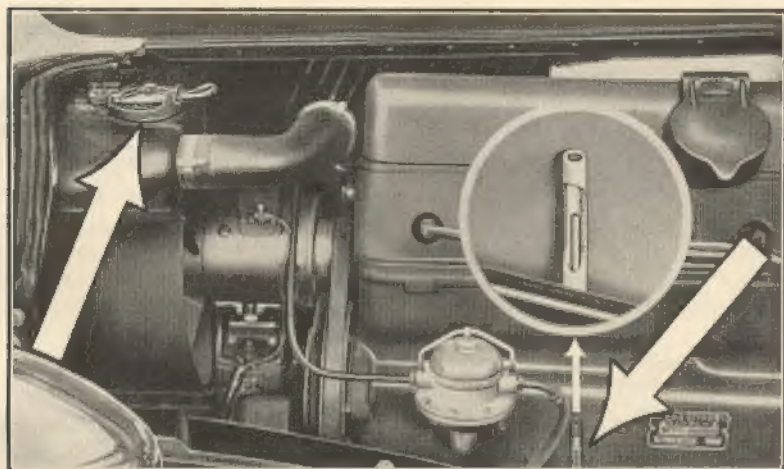
After 1,250 miles have been covered the most important part of the running in period is completed, and the speed can be progressively increased.

At 2000 miles, drain out the engine oil when warm and refill with fresh oil.

When 3000 miles have been reached the car should be capable of maximum performance.

# GENERAL INSTRUCTIONS

## BEFORE STARTING THE ENGINE



**Fig. 1. Radiator Filler Cap and Oil Level Gauge.**

### VERIFY THE FOLLOWING:—

1. The oil level in the engine sump. This is indicated by a rod which rises and falls in a tube, the movement being directly controlled by a float in the sump. The top of the rod should be between the lower and intermediate marks (FIG. 1); the top mark indicates the level at which the oil should be kept during the running in period.
2. The water level in the Radiator (FIG. 1). This should be  $1\frac{1}{4}$  inches below the top of the filler neck.
3. That sufficient petrol is in the tank. The gauge operates only when the ignition is switched on.
4. That the gear lever is in neutral.
5. That the hand brake is on.



## **STARTING THE ENGINE WHEN COLD**

Declutch.

Set the ignition advance control to position R and switch on the ignition.

Pull out the choke control fully, and press starter control, without depressing the accelerator pedal.

Do not keep the starter control engaged for more than 5 or 6 seconds at any one time.

Should the engine fail to respond on the first use of the control, allow an interval of 8 to 10 seconds before using it again.

After the engine has run for a brief period, push the choke control in to the halfway position. Leave it in this position for a few minutes until the engine is properly warmed up, then push the choke control right back.

When high grade petrol is used, ignition advance control should be set at A.

## **STARTING WHEN THE ENGINE IS HOT**

When using the starter, fully depress the accelerator pedal. Never race the engine when the car is stationary: it is unnecessary and harmful.

Before engaging the clutch, do not forget to release the handbrake by pushing the control lever downwards fully.

## **CHANGING GEAR**

The gear lever is locked in position whilst the clutch is engaged, therefore always depress fully the clutch pedal when changing gear. Always move the gear lever lightly.

## **WITH THE CAR IN MOTION**

### **INSTRUMENTS**

The grouping of the instruments is such that all dials are readily visible, the layout being as follows:—

Speedometer in the centre flanked on the left by the ammeter and clock, and on the right by petrol gauge and lighting switch.

An occasional glance should be given to them, especially during the running in period, with particular regard to the ammeter and the oil indicator light.

The ammeter needle should register on the charge side. The rate of charge will vary according to the condition of the battery and the number of lights in use. During daytime running and with the battery in a fully charged condition the charge reading will be very low. Should the needle remain at Zero when running, or register a discharge when the car is stationary with all switches off, the cause should be ascertained immediately.

The oil indicator light will come on when the ignition is switched on, and go out immediately the engine is started, or as the engine revolutions are increased above idling speed.

Should the warning light come on whilst the car is in motion, and the engine running above idling speed, stop at once and investigate the cause.

The oil level should first be checked and if correct, examine the oil pressure switch situated at the rear of the engine between the timing case and the starter.

If in doubt, consult a Citroen agent.

## **CONTROLS**

The various controls are conveniently placed as follows:—

### **WINDSCREEN WIPERS**

The windscreen wiper operating knobs are placed either side of the central windscreen opening control.

To start the arm on the driver's side, push the knob inward and turn anti-clockwise.

To start the arm on the passenger's side push the corresponding knob inward and turn clockwise.

To release and park the blades, push each knob inwards and turn in the reverse direction to above.

### **CHOKE CONTROL**

This is on the facia board to the right of the steering column and is marked C.

### **STARTER CONTROL**

This is on the facia board to the right of the choke control



## **INSTRUMENT LIGHT**

This is controlled by a push-pull switch on the extreme right of the facia board.

## **OIL INDICATOR LIGHT**

This is centrally placed on the facia board to the right of the gear lever.

## **IGNITION ADVANCE CONTROL**

This is fitted between the oil indicator light and the gear lever on the quadrant marked R and A.

## **TRAFFICATORS, DIPPING HEADLAMP AND HORN**

The controls for these are on the arm below the steering wheel. The larger curved lever operates the trafficators, the smaller lever the dipping headlamp, the horn button being on the end of the control arm.

## **WHEN STOPPING**

Always put the hand brake on by pulling out the control lever. As a precaution, when stopping on a gradient, engage either first or reverse gear. To release the hand brake, pull handle upwards, depress central catch and push downward fully.

## **POSSIBLE INCIDENTS**

Should the engine fail to respond immediately to use of the starter, the carburettor float chamber may be empty.

This should be refilled by using the hand priming lever on the petrol pump. It is normally sufficient to work this lever up and down 5 or 6 times.

If this is ineffective, turn the engine slightly and use the hand priming lever again.

## **IRREGULAR PETROL SUPPLY TO CARBURETTOR**

This is probably caused by choking of the petrol filter. To dismantle for cleaning remove the screw V (Fig: 4 or 5) and carefully withdraw the metal filter.

After cleaning, reassemble, checking and renewing the joints if necessary. Make sure the screw is securely tightened. Before attempting to start the engine refill the carburettor float chamber by working the hand lever L on the pump (Fig: 4 or 5).

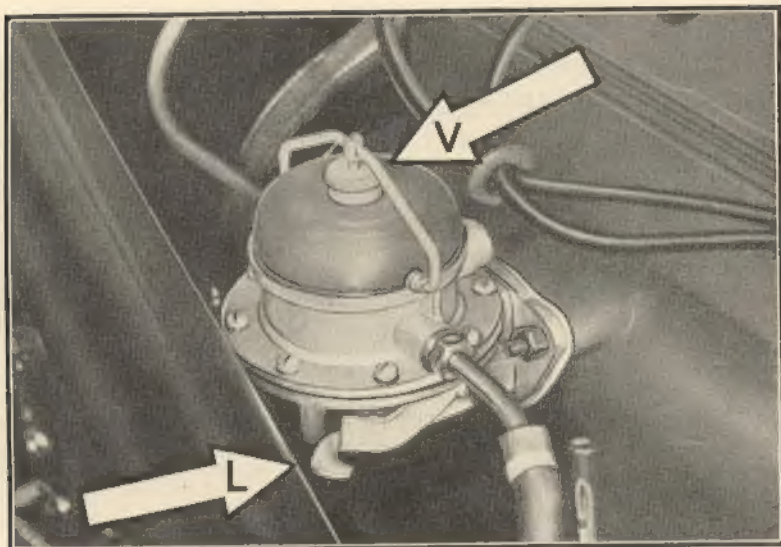


Fig. 4. S.E.V. Petrol Pump.

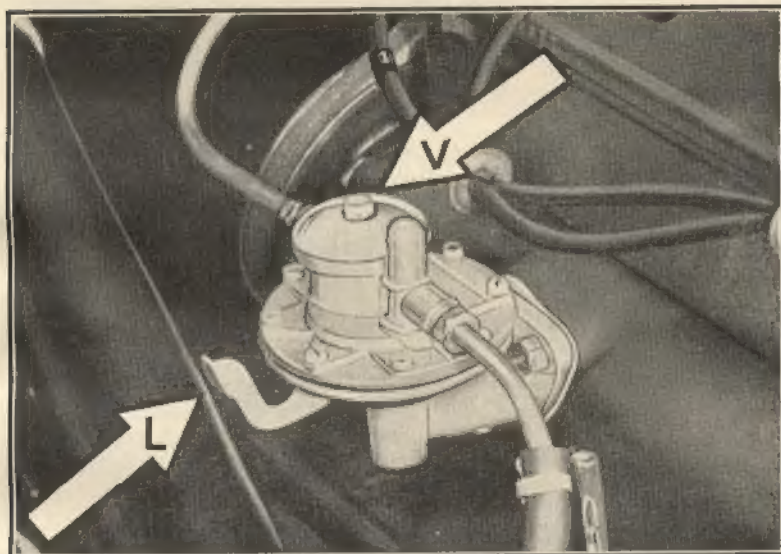


Fig. 5. Guiot Petrol Pump.

Should the engine fail to start or the petrol supply still be irregular, examine the filter and jets of the carburettor.

The filter *f* is inside the union *R*. Remove and clean.

The two main jets *G* are screwed into the carriers *J*.

The slow running jets are situated at *g*. Unscrew these jets and clean by blowing air through them.

When the jet carriers *J* are removed the float chamber will empty. Rinse out by working the petrol pump hand lever several times.

**IMPORTANT NOTE** Dismantling of the carburettor is a matter for great care. Do not disturb any parts other than those mentioned above, and if the foregoing is ineffective, have the ignition system checked by a Citroen agent.

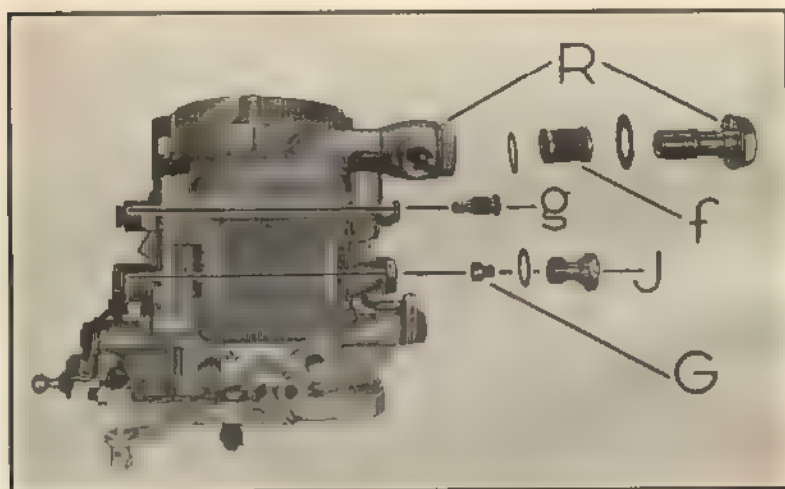


Fig. 6. Carburettor.



# **GENERAL MAINTENANCE**

## **BATTERY**

Frequently examine the level of the liquid in the battery to make sure the plates are covered. The level should be at least half an inch above the top of the plates.

To maintain the level add distilled water only. Never add acid.

Never allow the terminals to become corroded or sulphated. Regularly clean them and keep coated with Vaseline after tightening, and ensure the felt grease retaining washers are in position on the terminals.

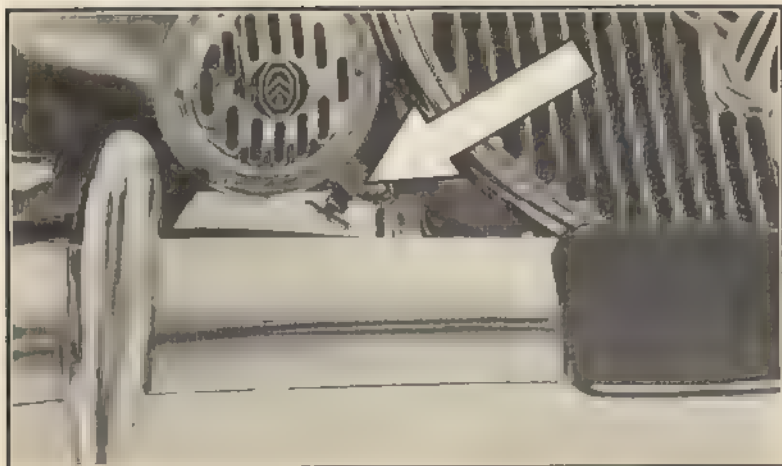
The resistance to freezing is greatest when fully charged. A completely discharged 12V battery will freeze at 14 FAHR.

## **AT THE APPROACH OF WINTER**

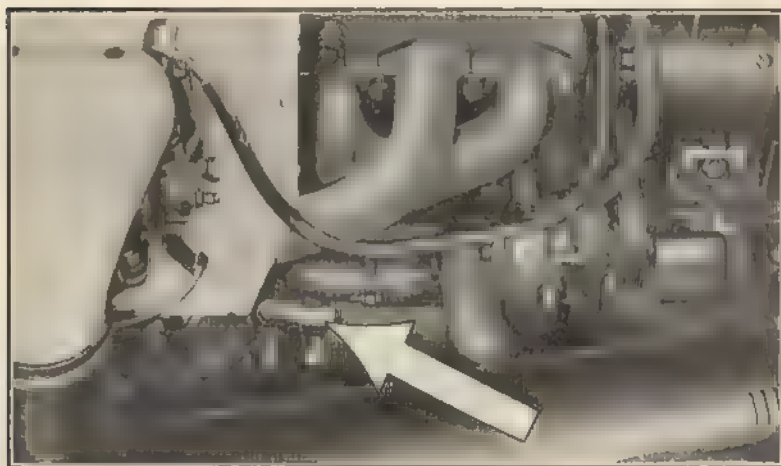
If, during severe cold weather, an anti-freeze solution is not added to the water system, both Radiator (see Fig: 7) and Cylinder block (see Fig: 8) should be drained nightly.

### **ANTI-FREEZE SOLUTION**

Many kinds of anti-freeze mixtures are available both proprietary and otherwise, therefore the quantity to use must be decided by the characteristics of the solution chosen or the makers' recommendations. It should be remembered that anti-freeze solutions do not usually evaporate, therefore when it is required to increase the contents of the water system, water only should be added.



**Fig. 7. The Radiator Drain Tap.**



**Fig. 8. The Cylinder Block Drain Tap.**



**Fig. 9. The Oil Filler Cap and Lockheed Reservoir.**

## **BRAKES**

- Monthly, check the level of the liquid in the reservoir; it should be maintained at a level  $\frac{3}{4}$  to 1 inch below the cap.

Only use the special Lockheed fluid. (Fig. 9).

Occasionally, check the brackets fixing the brake pins to the hull. Looseness here may cause vibration which could lead to chafing or fracture of the pipes.

Should the brake system become inefficient, the brake shoes can be set closer to the drums by normal adjustment. Have the pipes throughout the hydraulic system checked for leakage, bled and refilled if necessary.

## **WHEELS**

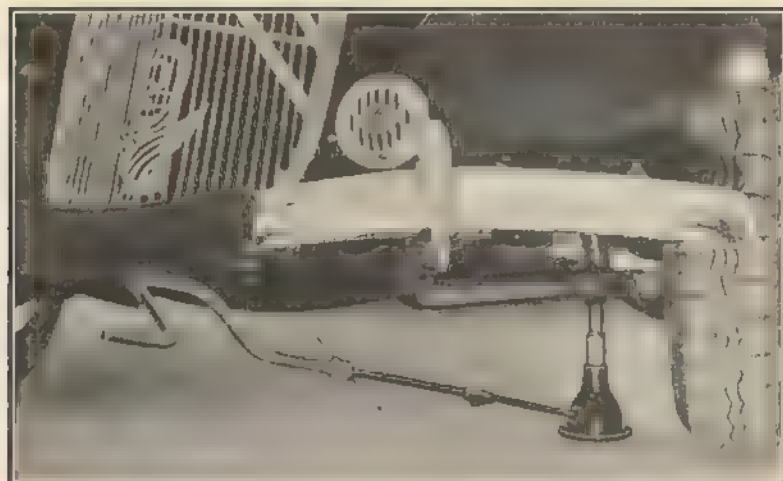
When changing a wheel, take care to place the head of the jack in the position provided at both front and rear, as shown in Figs. 11 and 12. Never lift the car by placing the jack in the centre of the rear axle. Remove the embellisher by unscrewing the centre screw. Unscrew the wheel nuts by turning them anti-clockwise.

When fitting a wheel, screw the nuts on lightly to start with, then very tightly working round on alternate nuts.

Check and if necessary retighten after 30 miles have been covered.

Check the wheel nuts periodically for tightness.





**Fig. 11. Jacking Position for Front Wheel.**



**Fig. 12. Jacking Position for Rear Wheel.**

## WARMING THE CAR

A simple and detachable heating system can be fitted at a small extra charge. This enables the interior of the car to be heated to an adequate temperature.

Use is made of air heated in passing through the upper part of the Radiator. This heated air is taken to the interior of the car through a tube which has its outlet on the left side of the front compartment.

A plug is fitted in the end of the tube, and by its removal and replacement, the quantity of warm air entering the car can be controlled.

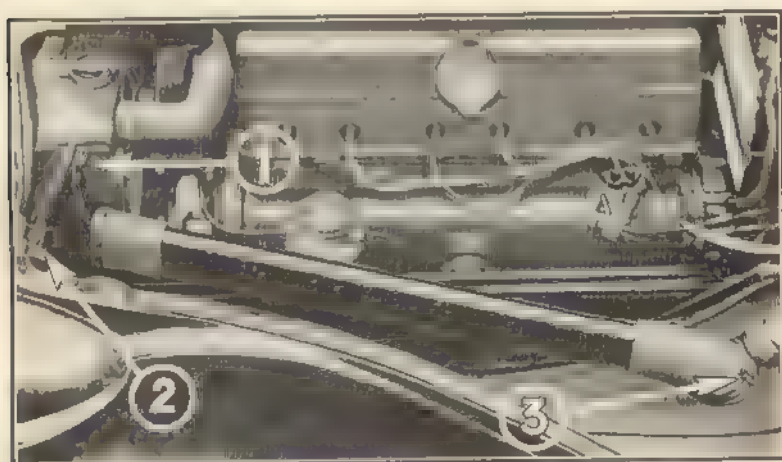


Fig. 13. Heating System.

## HEATER DISMANTLING INSTRUCTIONS

When the outside temperature reaches an average of 20° C. (68° F) or more, the heater assembly must be removed as described below:—

Remove nut (1) loosen nut (2) and remove the rear rubber connection (3). The complete assembly, that is the tube, front connection, and front intake can now be taken off. Retighten nut (2) and refit nut (1) and close the entry into the body with the control plug.

To refit the heater reverse the procedure.

## **BODY**

Washing the bodywork should be done with a hose and a chamois leather.

Care should be taken when brushing under the body, not to remove the sound deadening material.

Avoid all cleaning or polishing substances of an abrasive nature.



# LUBRICATION

Complete and regular greasing and general lubrication is the basis of good maintenance, and the foundation of the efficient running of a car.

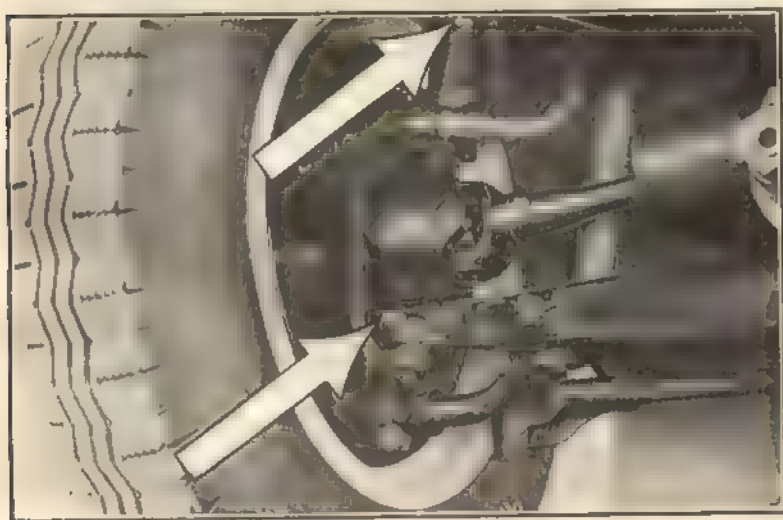
Use only good quality lubricants as recommended in the lubrication summary at end of book, and at the specified mile-ages in the following tables.

## TABLE OF GENERAL LUBRICATION AT SPECIFIED MILEAGES

The following comprise the various lubricating operations at 600, 2000, 4000, and 12,000 miles.

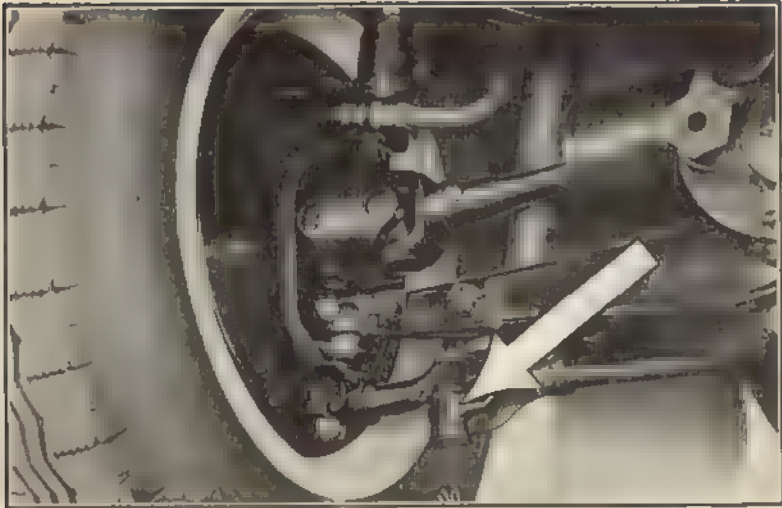
### 1. EVERY 600 MILES

- A. Grease the following points using one of the recommended greases.



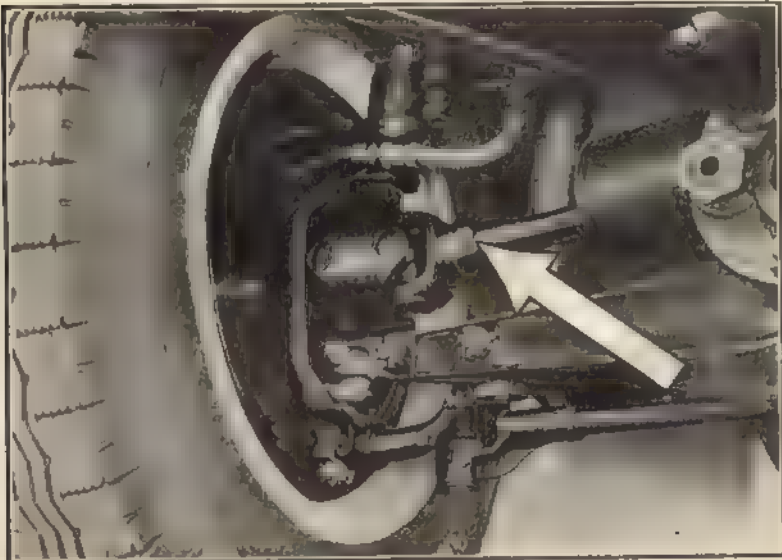
### BALL JOINTS OF SUSPENSION LINKS

4 greasers 2 on the left and 2 on the right. Pump in grease until it comes out of the joints.



### **BALL JOINTS OF STEERING SIDE RODS**

2 Greasers—one on the left, and one on the right. Pump in grease until it comes out of the joint.



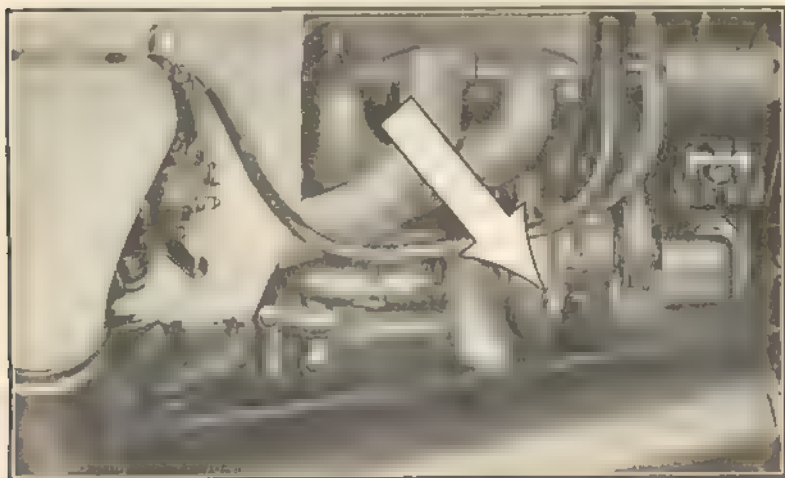
### **OUTER UNIVERSAL JOINTS**

2 greasers—one on the left, and one on the right. Pump in grease until resistance is high.

Maximum 30 strokes of the grease gun.

## EVERY 600 MILES

B. With a grease having a melting point above 100 C (212 F).



### WATER PUMP SHAFT—1 Greaser

Give 3 to 5 strokes of the pump, not more. Avoid over-greasing.



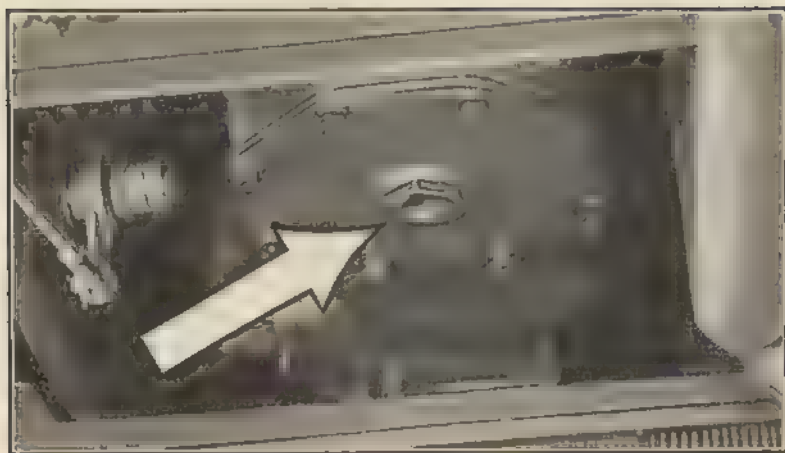
### BALL JOINTS OF GEAR CHANGE CONTROL LEVERS

7 points give several drops of thin oil.

Apply several drops of thin oil to each of the door hinges and the bonnet hinge, wiping off any excess

## 2. EVERY 2000 MILES

### A. Drain the engine sump.



### SUMP DRAIN PLUG

Draining should be done when the engine is warm as the oil will flow more easily. Refill with oil of a recommended grade suitable to local conditions.

Between drainings check the oil level at intervals, making sure the car stands on a level floor (See Fig. 1).

Add the required amount of oil when the level is dropping towards the minimum mark. The distance between the minimum and maximum marks corresponds to approximately 3½ pints.

B. To prolong the life of the tyres, change the fronts with the rear tyres diagonally. Make sure the pressure is correct.



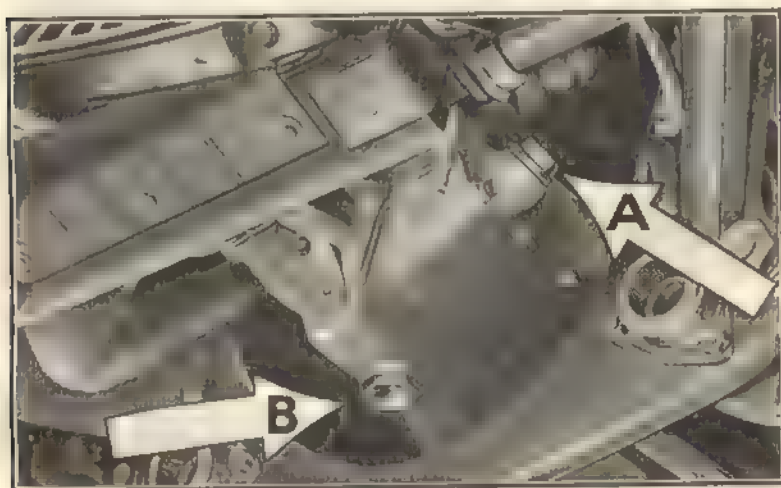
### 3. EVERY 4000 MILES

A. Check the oil level in the gearbox. Remove the filler plug A and wipe the dip rod attached. Replace the plug, screwing it in one turn only. Again remove it to check the level indicated by the presence of oil on the dip rod.

The oil level should be maintained within 5mm either side of the shallow groove on the rod.

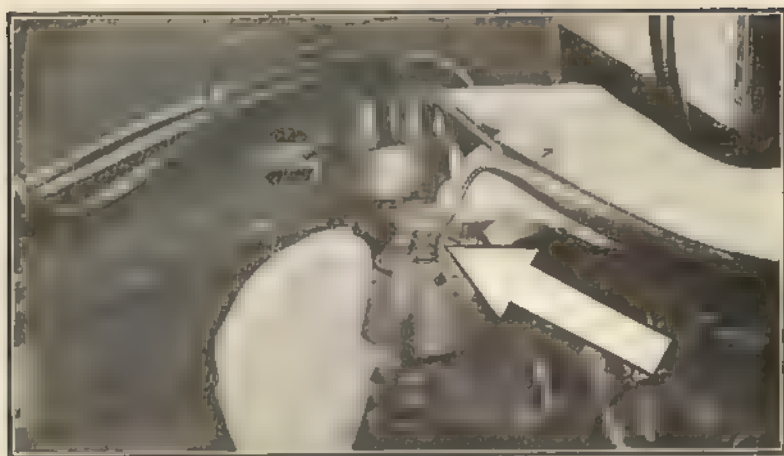
Should the level be low, drain and refill, using the special hypoid oil resistant to high pressure. **DO NOT ADD OIL.** The addition of small quantities or "topping up" to correct the oil level is not recommended. The characteristics of high pressure oils are such that mixing is inadvisable.

### ALWAYS DRAIN AND REFILL



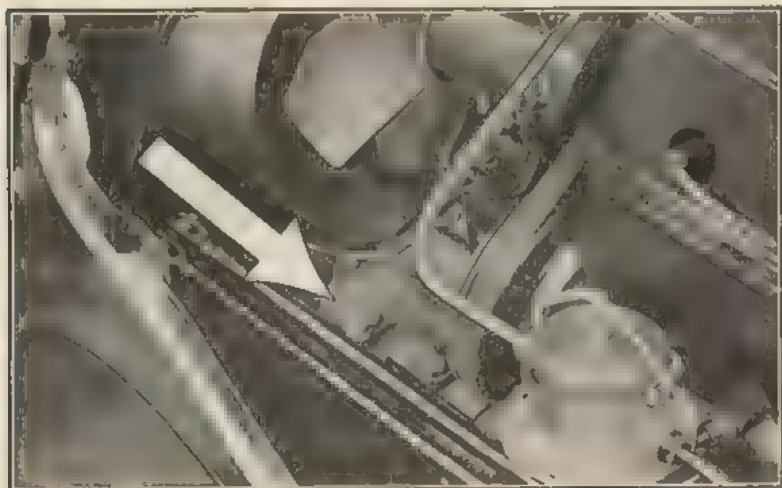
GEARBOX DRAIN AND FILLING PLUGS

B. Lubricate with thin oil.



#### **DISTRIBUTOR AUTOMATIC ADVANCE**

1 Oiling point. Remove the cover and the rotor, and apply 2 drops of oil to the felt pad under the rotor.



#### **CLUTCH FORK SHAFTS**

Apply several drops of oil to the two small holes in the casing (one on the right and one on the left).

D. Have the following cleaned preferably by a Citroen agent.

The filter of the air intake silencer.

The petrol filter in the rear boot.

The petrol pump filter.

The petrol filter in the carburettor.



**THE PETROL FILTER IN THE REAR BOOT**

#### **4. EVERY 12,000 MILES OR WHEN DISMANTLED**

A. Have the shock absorbers examined.

B. Have the gearbox drained when warm (B. Page 24).

Refill with new oil.

C. Lubricate:—

1. The steering box and the speedometer drive using thick grease as for the drive shafts.
2. The choke cable with a few drops of thin oil.
3. The front and rear hubs with the recommended grease.



# LUBRICATION SUMMARY

| APPLICATION   | ESSO                                      | PRICE'S   | SHELL  | VACUUM                                       | WAKEFIELD                               |
|---|---|---|--|--|---|
| <b>ENGINE</b><br>Check oil level daily<br>Change oil & flush every 2,000 miles<br>*Tropical conditions (above 90° F.)<br>*Normal conditions (32 to 90° F.)<br>*Arctic conditions (below 32° F.) | Essolube 40<br>Essolube 30<br>Essolube 20 | Energol SAE40<br>Energol SAE30<br>Energol SAE20 | Triple Shell<br>Double Shell<br>Single Shell | Mobiloil AF<br>Mobiloil A<br>Mobiloil Arctic | Castrol XXL<br>Castrol XL<br>Castrolite |
| <b>GEARBOX &amp; DIFFERENTIAL</b><br>Check oil every 4,000 miles<br>Change oil & flush every 12,000 miles   | Esso XP<br>Compound 90                    | Energol<br>EP SAE90                             | Spirax 90 EP                                 | Mobilube GX                                  | Castrol Hypoy                           |
| <b>REAR HUB BEARINGS</b>  | Esso Grease                               | Belmoline C                                     | Shell Retinax RB                             | Mobilhub Grease                              | Castrolase Heavy                        |
| <b>DRIVE SHAFT SLIDING ENDS</b><br><b>UPPER AND LOWER BALL JOINTS OF SUSPENSION LINKS</b><br><b>TRACK ROD BALL JOINTS</b>   | Esso Grease                               | Belmoline D                                     | Shell Retinax CD                             | Mobilgrease No. 2                            | Castrolase CL                           |
| <b>WATER PUMP SHAFT</b>   | Esso Water-proof Grease                   | Belmoline A                                     | Shell Retinax P                              | Mobilgrease No. 6                            | Castrolase Water Pump Grease            |
| <b>SUNDRY OILING POINTS</b>   | Light Machine Oil                         | Light Machine Oil                               | Light Machine Oil                            | Light Machine Oil                            | Light Machine Oil                       |

\* These temperatures are given as a basis only, owners must be guided by local conditions.  
 If in doubt, overseas owners should obtain confirmation in the area in which the car is operated.

## INSIST UPON GENUINE SPARE PARTS

When it becomes necessary to replace any parts of your car, always insist upon your repairer using genuine Citroen spare parts.

Genuine spare parts are better and cheaper than so-called alternatives. They are manufactured under the same conditions as those used for the construction of new cars, with the same quality of material and workmanship. Being made by mass production methods, low cost is assured.

Further, the use of substitute parts instead of genuine ones invalidates the guarantee issued for a new car.

Information concerning the supply of spare parts can be obtained from the

Spare Parts Dept;  
Citroen Cars Ltd.,  
Trading Estate,  
Slough,  
Bucks,  
England.

